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AUTHOR Salzer, Mark S.
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ABSTRACT

This paper presents principles that should be considered in planning and interpreting studies of outcomes of interventions with children receiving mental health services. Principles to consider when planning outcome studies include recognizing that "outcome" refers to multiple rather than single domains and choosing outcome domains that coincide with program theory. Principles to consider when interpreting results of outcomes studies include the following: (1) consider the source of information when evaluating outcome results; (2) recognize that clinical outcomes are not solely the result of services; (3) evaluate for adequate statistical power and appropriate procedures in data analysis; and (4) remember that conclusions are limited by the chosen outcome domains. (DB)

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Principles for Conducting Outcomes Research

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Introduction

Outcomes data have increasingly become a meter by which mental health services are evaluated. This is particularly the case in this age of managed care, and calls for accountability in service delivery where providers are asked to justify services on the basis of client outcomes. Outcomes data also are crucial for quality assurance and continuous quality improvement efforts, as embodied in concepts such as outcomes monitoring and outcomes management. However, while the movement toward outcome monitoring should be applauded, evaluation efforts involving outcomes should not be naively undertaken. Service providers, administrators, and evaluators should seriously consider a number of important theoretical and research issues that can limit conclusions made from outcomes data and research studies. A number of principles should be considered when planning outcome studies and especially when interpreting research results.

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Principles to Consider when Planning Outcomes

Recognize that "outcome" refers to multiple rather than a singular domain.

The word "outcome" has been used many times without outlining what is actually meant. A vague use of the term seems common. Multiple outcomes are generally acknowledged, but the apparent lack of specificity when discussing outcomes suggests a need for further conceptualization.

Hoagwood, Jensen, Petti, & Burns (in press) developed an excellent conceptual model of outcomes that attends to multiple levels (e.g., individual, family, and community) and contexts (e.g., home, school, and peer group). Their model consists of five domains: (a) symptomatic/diagnostic (e.g., depression, aggression, and diagnosis); (b) functional (e.g., child's adaptation to various environments); (c) consumer perspectives (e.g., client satisfaction and family's quality of life); (d) environmental (e.g., changes in marital relationship or school environment); and (e) services and systemic (e.g., reductions in out-of-home placements, hospitalization rates, and length of stay).

I would add one additional outcome domain&endash;protection of child and family rights and dignity. This domain would include no harm occurring to the child or family during treatment, maintenance of confidentiality, provision of effective services, and outcomes associated with consumer empowerment, such as opportunities for family involvement in developing agency policies and services as well as family involvement in treatment, especially a significant "voting" role in treatment decisions.

Choose outcome domains that coincide with the program theory.

It is important to select outcome domains that match the service program being evaluated. What outcomes would you reasonably expect to be associated with an adequate implementation of your program theory? What additional outcomes would your program like to meet?

This principle became particularly clear as a result of some work recently done by the author to define quality indicators with an agency that provides services to children and adolescents who have had significant contacts with the juvenile justice system. They were asked to list crucial elements associated with producing positive clinical outcomes. The first question asked was what was meant by clinical outcomes, as they recently had problems developing a shared understanding of this term in a meeting with a managed care company. This agency recognized that they might not be able to significantly impact clinical symptoms in their programs, but hoped to have an impact on functioning, especially societal, school, and vocational

functioning, especially societal, school, and vocational functioning. They also were very concerned with creating a safe environment (i.e., protecting client rights) for those in their program.

Principles to Consider when Interpreting Outcome Results

The source of information should be considered when reflecting on outcome results.

Constructionist theories suggest that each individual has their own unique perspective on the world. Truth is truly in the eye of the beholder. In the case of collecting outcomes data, it seems important to consider how different sources (e.g., parents, clinicians, children, and teachers) may contribute different information. Many possibilities exist that might explain why we would obtain different outcome results from different sources, including: (a) each source has a different sample of a particular child's behavior from which to make outcome judgments, and (b) points of reference for making judgments differ.

In regards to the first reason, parents may be good reporters of some behaviors, but may be less aware of certain aspects of their child's life. For example, the amount of information a parent has about a child's school and social life may vary considerably. The level of parent involvement would affect the validity of parent reports in these areas. Another area of interest concerns the validity of reports of externalizing and internalizing behaviors. Parents are generally thought to be better reporters of externalizing behaviors, because they are more likely to come to their attention. Adolescents are viewed as better reporters of internalizing behaviors. Teachers may provide valid reports of academic and social behavior, but fewer valid reports for other behaviors. Service providers likely have very limited knowledge of the child's behavior outside of the service setting.

In addition to interacting with the child in different contexts, different sources of information likely have different points of reference from which to make their judgments. In other words, the sample to which the child is being compared for making judgments is likely to differ. Response categories on various scales (e.g., somewhat or sometimes true, a lot or a little, more than average or less than average) may have different meanings to different judges. For instance, teachers are very familiar with a wide-range of children and may have a different sense of what "average" or "a lot" mean, compared to parents and clinicians.

Recognize that clinical outcomes are not solely the result of services.

Multiple factors impact the mental health of children. These include family influences, peer influences, cultural influences, economic influences, and strengths and resiliency. These factors must be considered as additional

resiliency. These factors must be considered as additional influences on changes in symptoms and functioning that occur between intake and exit from services. In a review of research on the impact of disasters on the psychological health of adults and children (Salzer & Bickman, in press), one consistent finding is that disasters are associated with high levels of psychological distress immediately following the traumatic event. However, as the community and families recover, usually without the aid of mental health interventions, psychological problems remit. One explanation for these results is based on a central tenet of ecological theories&endash;natural systems work to return to stasis following a disruption.

Children and families entering services do so at a time of great upheaval and are generally found to be improved at the end of treatment. However, the role of services in bringing about such changes often fails to be separated from non-treatment effects. The natural resiliency and resources of children and family systems likely contribute to improvements over time. Children and families, either consciously or unconsciously, work to make changes that alleviate stressors, with and without help from service providers. Children, parents, and other family members also rely on their natural resources, such as friends and other family members, in addition to the support and guidance provided by the service system. The fact that even non-treatment control groups may improve over time supports the notion that natural recovery processes are important factors to consider when making causal statements about the relationship between treatment and improvement.

Use of control groups would be one obvious approach to take in order to distinguish between natural recovery processes and treatment effects. The development of long-term norms on various measures for those with severe problems who have not received services might be another approach. The clinical outcomes for one child, gathered at 6-months post-intake, could be compared to the 6-month norms for children who also scored high on the same instrument at time 1 but received no treatment.

Adequate statistical power and appropriate procedures are necessary when analyzing data.

Statistical conclusion validity (Bickman, 1990) is a significant problem with current research on outcomes associated with measures of mental health. Statistical conclusion validity refers to the researchers' ability to make valid statistical conclusions, including the ability to detect an effect when one is present (i.e., power) and when one is not present (i.e., Beta or type II error). One concern is that many studies lack sufficient statistical power to detect small or medium effect sizes, due to small samples. This may, in fact, account for some of the null results and inconsistent results reported in the literature for various interventions.

While it depends on the effect size that one expects to be associated with the intervention, in general, researchers should strive for large sample sizes whenever possible.

While lack of statistical power may limit the number of studies finding positive effects for community interventions, a great number of studies also include multiple, unplanned statistical analyses that inflate the familywise error rate to such an extent that erroneous conclusions might be made suggesting an intervention is effective when it may not be (i.e., alpha or type I error). For example, it appears common for researchers to conduct multiple univariate tests without the proper corrections for inflated alpha levels.

Conclusions are limited by the outcome domains you choose.

Results from one outcome domain cannot be used as a proxy for other domains. This is a particularly important concept to keep in mind when attempting to assess the clinical effectiveness of services, without obtaining data on clinical symptoms or functioning. For example, reductions in service utilization, such as the number of out-of-home placements or decreased rates of hospitalization, may be reported to imply that a service system or a particular service like case management are clinically effective. However, service utilization outcomes may predominantly reflect modifications in system priorities and policies regarding level of care or length of stay decisions rather than actual changes in the child's behavior (e.g., one of the philosophies associated with a system of care places an emphasis on keeping children in their homes, or at least their home communities, and this philosophical change alone may account for decreases in out-of-home placements and hospitalization rates regardless of changes in the child's behavior). While extremely important, service utilization outcomes are of little benefit in evaluating the clinical effectiveness of a system of care.

There appears to be another current trend toward reporting services to be effective based on results from consumer satisfaction instruments. Consumer satisfaction is vitally important to how services should be evaluated, but the relationship between satisfaction and clinical outcomes is unclear (Lambert, Salzer, Bickman, 1996). The best way to assess clinical outcomes may be through the use of measures assessing symptoms and functioning.

References

Hoagwood, K., Jensen, P. S., Petti, T., & Burns, B. J. (in press). Outcomes of care for children and adolescents: A conceptual model and review. Journal of the American Academy of Child and Adolescent Psychiatry.

Bickman, L. (1990). Advances in program theory. San Francisco, CA: Jossey-Bass.

Lambert, W., Salzer, M. S., & Bickman, L. (1996). Clinical outcome, consumer satisfaction, and ad hoc ratings of improvement. Manuscript submitted for publication.

Salzer, M. S., & Bickman, L. (in press). The short- and long-term psychological impact of disasters: Implications for mental health interventions and policy. In R. M. Gist & B. Lubin (Eds.) Response to disaster: Psychosocial, community, and ecological approaches. Taylor & Francis.

Authors

Mark S. Salzer, Ph.D.
Research Associate
Center for Mental Health Policy
Vanderbilt University
1207 18th Avenue South
Nashville, TN. 37212
Voice: 615/343-1668
Fax: 615/322-7049
Salzer@UANSV5.Vanderbilt.Edu

Liberton, C., Kutash, K., & Friedman, R. M. (Eds.), (1997). The 9th Annual Research Conference Proceedings, A System of Care for Children's Mental Health: Expanding the Research Base (February 26 - 28, 1996). Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Research & Training Center for Children's Mental Health.